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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,418	01/09/2004	Julien Metzger	033813-033	6372

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EXAMINER	
MAKI, STEVEN D	
ART UNIT	**PAPER NUMBER**
1733	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/753,418	METZGER, JULIEN	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2006 and 16 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 11* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Ishihara

2) **Claims 1-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara (US 2002/0139164) in view of Ghilardi (US 4705088), Japan 807 (JP 1-204807) or Buddenhagen (US 2612928).**

With respect to Ishihara (filed 2-19-02), applicant cannot rely upon the foreign priority papers to overcome this rejection because claims 1-11 of this application are not entitled to the benefit of the filing date (7-9-01) of applicant's foreign priority document France 01/09111. The subject matter of some of the incisions having the specified traces "over at least a height He equal to half the maximum depth Hi of the incision" is not found in applicant's priority document. Applicant's priority document recites "located between the said surface in the new condition and 2/3 of the maximum depth of the incision" instead of --over at least a height He equal to half the maximum depth Hi of the incision--. In this application, the original disclosure describes the height He in the figure 7 embodiment as being equal to half the total height Hi of the incision. However, applicant's priority document fails to include figures 6 and 7.

Ishihara discloses a tire comprising sipes ("incisions") having a width of 0.1 - 2 mm and a three dimensional shape. The sipe is formed using a sipe blade, which may have primary molded shape (corrugated shape) and secondary molded shape

(protruded shape). The corrugated shape comprises a succession of "sipe portions" ("incision portions"). The protruded shapes ("relief elements having amplitude K") may be formed in each "sipe portion" along substantially the entire depth of the sipe mold blade. See for example figure 4d. Ishihara does not specifically recite orienting some portions [plural] at an angle beta of at most equal to 15 degrees. However, it would have been obvious to one of ordinary skill in the art to provide secondary shape (e.g. protruded portions) on "longitudinally oriented" sipe portions of a sipe as suggested by Ghilardi, Japan 807 or Buddenhagen since (1) the sipe of each of Ghilardi, Japan 807 and Buddenhagen is located in a "ridge" (land portion) and has a "primary shape" (two-dimensional shape) including "longitudinally oriented portions" and (2) Ishihara teaches providing a sipe having a primary shape (two dimensional shape) with a secondary shape (e.g. protruded portions) such that the sipe has a three dimensional shape so that the tire has improved stiffness. In Ghilardi, the sipe (lamel) is located in a ridge (rib) and comprises longitudinally oriented sipe portions "c" and "e", which are inclined at an angle of for example 5-20 degrees with respect to the circumferential direction. With respect to "at most equal to 40 degrees, the angle between points A and B of the sipe forms a relatively small acute angle with respect to the transverse direction (see figure 1 of Ghilardi). With respect to Japan 807, the sipe 5 is located in a ridge (block) and comprises longitudinally oriented sipe portions, which are oriented at 0 degrees with respect to the circumferential direction. With respect to at most equal to 40 degrees, the angle between the opposite ends of the sipe is a relatively small acute angle with respect to the transverse direction (see left illustration in of figure 3 of Japan 807). In

Buddenhagen, see sipes 34 in figure 5. The limitation of the total length being at least 1/5 of the width of the ridge would have been obvious in view of the total length of the "longitudinally oriented portions" suggested by Ghilardi, Japan 807 or Buddenhagen. The limitation of the amplitude of the relief elements being 4-10 times the mean width of the incision would have been obvious in view of the size of the protruded portions suggested by Ishihara.

Hence, Ishihara discloses a tire tread having a sipe comprising a primary shape (the shape seen at the tread surface) and a secondary shape (the shape in the depth direction). The claimed relief elements having amplitude K read on the "relief elements" of Ishihara's secondary shape. As an example of a primary shape, Ishihara teaches a zig-zag shape. However, other suitable "primary shapes" for sipes include a "primary shape" having "longitudinally oriented portions" as disclosed by Ghilardi (figure 1, rupture water film and reduce wear), Japan 807 (figure 3, improved grip) or Buddenhagen (figure 5).

As to the dependent claims: As to claim 2, note the suggestion from Ghilardi or Buddenhagen to form a sipe with relatively long "longitudinally oriented portions" (the optimum length of which could have been determined without undue experimentation). As to claims 3-4, Ishihara suggests forming the protruded portions along substantially the entire depth of the sipe. As to claims 5 and 6, Ghilardi suggests an angle of 5 degrees. Japan 807 and Buddenhagen suggest an angle of zero degrees with respect to the circumferential direction. As to claims 7-9, it would have been obvious to incline the sipes at an angle different from zero degrees with respect to the radial direction

such that they are all inclined in the same direction or alternately inclined in opposite directions (positive and negative) since it is taken as well known / conventional per se in the tire tread art to incline sipes at an angle different from zero with respect to the radial direction in the same direction or in opposite directions either to improve wear or to make the sipe active in braking or acceleration. The limitation of claim 11 would have been obvious in view of the location of the longitudinally oriented portions suggested by Japan 807 or Buddenhagen.

3) **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara in view of Japan 807 as applied above and further in view of Fukuoka (US 5,950,700).**

As to claim 9, it would have been obvious to incline sipe portions of the same sipe of Japan 807 in opposite directions with respect to the radial direction in view of the suggestion from Fukuoka to incline sipes portions connected by a longitudinally oriented portion in opposite directions with respect to the radial plane to improve scratching effect and control degradation of steering stability / braking property on wet road as the tire wears.

Heinen (available under 102(b))

4) **Claims 1-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinen (WO 99/48707) in view of Ghilardi, Japan 807 or Buddenhagen.**

Heinen discloses a tire tread having sipes in a ridge (e.g. block). The sipe may have various two dimensional "primary" shapes (figures 9A to 9D, 10) and protrusions

and recesses ("secondary shape") in the depth direction, which interlock and increase rigidity of the elastomeric elements of the tread. Heinen does not specifically recite orienting some portions [plural] at an angle beta of at most equal to 15 degrees. However, it would have been obvious to one of ordinary skill in the art to provide secondary shape (e.g. protrusions / recesses) on "longitudinally oriented" sipe portions of a sipe as suggested by Ghilardi, Japan 807 or Buddenhagen since (1) the sipe of each of Ghilardi, Japan 807 and Buddenhagen is located in a "ridge" (land portion) and has a "primary shape" (two-dimensional shape) including "longitudinally oriented portions" and (2) Heinen teaches providing a sipe having a primary shape (two dimensional shape) with a secondary shape (protrusions /recesses) such that the sipe has a three dimensional shape so that the tire has improved stiffness. In Ghilardi, the sipe (lamel) is located in a ridge (rib) and comprises longitudinally oriented sipe portions "c" and "e", which are inclined at an angle of for example 5-20 degrees with respect to the circumferential direction. With respect to "at most equal to 40 degrees, the angle between points A and B of the sipe forms a relatively small acute angle with respect to the transverse direction (see figure 1 of Ghilardi). With respect to Japan 807, the sipe 5 is located in a ridge (block) and comprises longitudinally oriented sipe portions, which are oriented at 0 degrees with respect to the circumferential direction. With respect to at most equal to 40 degrees, the angle between the opposite ends of the sipe is a relatively small acute angle with respect to the transverse direction (see left illustration in of figure 3 of Japan 807). In Buddenhagen, see sipes 34 in figure 5. The limitation of the total length being at least 1/5 of the width of the ridge would have been obvious in

view of the total length of the "longitudinally oriented portions" suggested by Ghilardi, Japan 807 or Buddenhagen. The limitation of the amplitude of the relief elements being 4-10 times the mean width of the incision would have been obvious in view of the size of the protrusions / recesses suggested by Heinen.

Hence, Heinen discloses a tire tread having a sipe comprising a "primary shape" (the shape seen at the tread surface) and a "secondary shape" (the shape in the depth direction). The claimed relief elements having amplitude K read on the "relief elements" of Heinen's secondary shape. As an examples of a "primary shape", see figures such as figure 9A. Other suitable "primary shapes" for sipes include a "primary shape" having "longitudinally oriented portions" as disclosed by Ghilardi (figure 1, rupture water film and reduce wear), Japan 807 (figure 3, improved grip) or Buddenhagen (figure 5).

As to the dependent claims: As to claim 2, note the suggestion from Ghilardi or Buddenhagen to form a sipe with relatively long "longitudinally oriented portions" (the optimum length of which could have been determined without undue experimentation). As to claims 3-4, Heinen suggests forming the protruded portions along substantially the entire depth of the sipe. As to claim 5, Ghilardi suggests an angle of 5 degrees and Japan 807 and Buddenhagen suggest an angle of zero degrees with respect to the circumferential direction. As to claims 7-9, it would have been obvious to incline the sipes at an angle different from zero degrees with respect to the radial direction such that they are all inclined in the same direction or alternately inclined in opposite directions (positive and negative) since it is taken as well known / conventional per se in the tire tread art to incline sipes at an angle different from zero with respect to the radial

direction in the same direction or in opposite directions either to improve wear or to make the sipe active in braking or acceleration. The limitation of claim 11 would have been obvious in view of the location of the longitudinally oriented portions suggested by Japan 807 or Buddenhagen.

5) **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heinen in view of Japan 807 as applied above and further in view of Fukuoka (US 5,950,700).**

As to claim 9, it would have been obvious to incline sipe portions of the same sipe of Japan 807 in opposite directions with respect to the radial direction in view of the suggestion from Fukuoka to incline sipes portions connected by a longitudinally oriented portion in opposite directions with respect to the radial plane to improve scratching effect and control degradation of steering stability / braking property on wet road as the tire wears.

Allowable Subject Matter

6) **Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

The prior art fails to suggest the limitation of claim 10 in combination with the subject matter of claim 1. Europe 692 (published after the filing date of applicant's parent application PCT/EP02/07003, which includes figures 6 and 7) teaches two "narrow" lateral surfaces 5 (abstract, paragraph 14 of machine translation) instead of "a total length Lt at least equal to one-fifth of the width L of the ridge" as in claim 1.

Furthermore, Europe 892 fails to teach the portions having "opposite inclinations" as in claim 10. Although Japan 419 shows oppositely inclined sipe portions, Japan 419 shows the two inclined portions of the sipe (figures, 3 and 4) as being inclined at about 40 degrees with the longitudinal direction instead of "at most 15°" or "smaller than 15°".

Remarks

7) Applicant's arguments filed 3-16-06 have been fully considered but they are not persuasive.

Applicant argues that Ishihara has been removed as a reference. The English translation of applicant's foreign priority document filed 3-22-06 has been received. However, claims 1-11 are not entitled to the benefit of the filing date of applicant's foreign document. See discussion of applicant's foreign priority document in paragraph 2 of this office action. Furthermore, Heinen (the alternative primary reference) remains available as prior art under 35 USC 102(b).

Applicant argues that there is no teaching in the secondary references of providing such secondary shapes in a tread of the type disclosed by Ishihara. This argument is not persuasive. Ishihara discloses a tire tread having a sipe comprising a primary shape (the shape seen at the tread surface) and a secondary shape (the shape in the depth direction). The claimed relief elements having amplitude K read on the "relief elements" of Ishihara's secondary shape. As an example of a primary shape, Ishihara teaches a zig-zag shape. However, other suitable "primary shapes" for sipes include a "primary shape" having "longitudinally oriented portions" as disclosed by

Ghilardi (figure 1, rupture water film and reduce wear), Japan 807 (figure 3, improved grip) or Buddenhagen (figure 5).

8) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
June 10, 2006

STEVEN D. MAKI
PRIMARY EXAMINER

6-10-06